

SCANNING ELECTRON MICROSCOPE AND METHOD
OF DETECTING ELECTRONS THEREIN

ABSTRACT OF THE DISCLOSURE

There is disclosed a scanning electron microscope capable of detecting secondary electrons emitted from a specimen, using a semi-in-lens type objective lens. A voltage is applied to the specimen from a power supply to decelerate the electron beam immediately ahead of the specimen. Secondary electrons produced from the specimen are confined by a magnetic lens field and move spirally upward. The secondary electrons moving upward travel linearly from a location where the magnetic field of the objective lens is weak. Then, the electrons strike first and second conversion electrodes, producing a large amount of secondary electrons. A voltage is applied to the front face of a detector to produce an electric field near the first opening in the inner polepiece. This field directs the secondary electrons toward the detector, where they are detected.

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